

SHARLOVSKAYA, M. S., Candidate of Tech Sci (diss) -- "Convective heat exchange in a boiling layer". Tomsk, 1959. 13 pp (Min Higher Educ USSR, Tomsk Order of Labor Red Banner Polytech Inst im S. M. Kirov), 150 copies (KL, No 21, 1959, 117)

YAVORSKIY, I.A.; SHARLOVSKAYA, M.S.

Experimental study of the start-up of natural coal in the bed
with hot air blast. Trudy Transp.-energ.inst.Sib.otd. AN SSSR
no.8:41-48 '59. (MIRA 15:5)

(Furnaces--Combustion)

SHARLOVSKAYA, M.S.

Electron microscopic study of the form of ash particles. Izv.
Sib. otd. AN SSSR no.5:42-48 '62. (MIRA 18:2)

1. Transportno-energeticheskiy institut Sibirskogo otdeleniya
AN SSSR, Novosibirsk.

SHARLOVSKAYA, M.S., kand. tekhn. nauk; SHUGUROV, V.F., kand. geol.-
mineral. nauk

Results of studying mineral impurities and ash of Cherekhovo
coal. Teploenergetika 10 no.7:51-54 J1 '63. (MIRA 16:7)

1. Khimiko-metallurgicheskiy institut i Institut geologii i
geofiziki Sibirskogo otdeleniya AN SSSR.
(Cherekhovo Basin--Coal--Analysis)

BREDYUK, G.P., kand.tekhn.nauk; AFANAS'YEVA, N.N., inzh.; SHARLOVSKAYA, M.S.,
kand.tekhn.nauk

Thermophysical properties of asbestos ballast. Trudy NII ZHT no.31:125-
139 '62. (MIRA 16:9)
(Ballast (Railroads)—Testing) (Asbestos)

SINAYSKIY, N.A., inzh.; MERKULOV, A.G., inzh.; SHARLOVSKAYA, M.S., kand.
tekh. nauk

Results of a roentgenographic analysis of power fuel ashes.
Teploenergetika 11 no.12:65 D '64 (MIRA 18:2)

1. Khimiko-metallurgicheskiy institut Sibirskogo otdeleniya
AN SSSR.

PARFENOV, Oleg Dmitriyevich; SHARLOVSKIY, Yu.V., nauchnyy red.;
SIROTINA, S.L., red.; NESMYSLOVA, L.M., tekhn. red.

[Methods of increasing the accuracy of metalwork on
universal metal-cutting machines] Sposoby povysheniia tochnosti obrabotki na universal'nykh metallorezhushchikh stankakh.
Moskva, Proftekhizdat, 1962. 102 p. (MIRA 16:3)
(Metal cutting) (Cutting machines)

CHURABO, Dmitry Dmitriyevich; MALOV, A.N., kand. tekhn. nauk
atsenent; SHARLOVSKIY, Yu.V., inzh., red.

[Parts and units of instruments; their design and construction. A handbook] Detali i uzly priborov; konstruirovaniye i
raschety. Spravochnoe posobie. Moskva, Mashinostroeniye,
1965. 710 p. (MIRA 18:12)

TIKHONOV, Yuriy Nikolayevich; SHARLOVSKIY, Yu.V., inzh., red.

[Technology of the manufacture of germanium and silicon diodes and triodes] Tekhnologiya izgotovleniya germanievykh i kremnievykh diodov i triodov. Moskva, Energiia, 1964. 239 p. (K1A 18:1)

BELEVTSSEV, Artem Tikhonovich; SHARLOVSKIY, Yuliy. 1965.

[Microminiaturization of radioelectronic apparatus]
Mikrominiatimizatsiya radioelektronnoi apparatury.
Moskva, Energiia, 1965. 256 p. (MIRA 18:3)

28213
S/194/61/000/005/044/078
D201/D303

16,8000 (1329,1132)

AUTHORS:

Vasil'yev, V.G and Sharlya, I.

TITLE:

Dynamic properties of the proportional-plus-integral
regulator type ΨP -130 (IR-130)

PERIODICAL:

Referativnyy zhurnal. Avtomatika i radioelektronika,
no. 5, 1961, 39-40, abstract 5 V326 (Tr. Khar'kovsk.
politekhn. in-ta, 1960, 30, no. 1, 57-71)

TEXT: To simplify the given structural diagram of the regulator
(R) - linearization is made of relationships with indifferent non-
linearities. The time of acceleration and of coasting of the load
motor and of the isodrome motor are neglected. The characteristics
of switching circuits of control motors may be linearized also if
provided the changes of the regulated quantity and consequently
those of input of R occur relatively slowly. In this case the trans-
fer function of R may be represented in the form

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KHIMUNIN, S.D., kand. tekhn. nauk; SHARLYGINA, K.A., ml. nauchn. sotr.; VOLCHKOVA, A.T., st. inzh.; Prinimali uchastiye: POPOVA, N.V., inzh.; BYCHKOVA, A.A., inzh.; SKARBOVICHUK, T.G., inzh.; VIYRA, I.I., arkhitektor; SHEYNA, T.M., st. tekhnik

[Recommendations on redesigning and improving the living conditions of apartment houses of old towns] Rekomendatsii po pereplanirovke i povysheniiu blagoustroistva zhilykh domov staroi zastroiki gorodov. Leningrad, Stroizdat, 1965. 131 p. (MIRA 18:8)

1. Akademiya kommunal'nogo khozyaystva. Leningradskiy nauchno-issledovatel'skiy institut. 2. Rukovoditel' laboratorii kapital'nogo remonta zhilykh domov Leningradskogo nauchno-issledovatel'skogo instituta Akademii kommunal'nogo khozyaystva im. K.D.Pamfilova (for Khimunin).

GEORGIYEV, A.V.; SAVOSTINA, O.N.; SHARLYKOV, V.A.

Need of the population of Kazan for prosthodontics. Nauch.
trudy Kaz. gos. med. inst. 14:23 '64. (MIRA 18:9)

1. Kafedra ortopedicheskoy stomatologii (zav. - prof. I.M.
Okoman) i stomatologicheskaya poliklinika (glavnyy vrach -
N.Sr.Blinova) Kazanskogo medits'nskogo instituta.

SHARLYKOV, V.A., vrach

Plastic AKR-7 in prosthodontics and the deficiencies connected
with the violation of rules governing its use. Vop. obshchei
stom. 17:110-112 '64. (MIRA 18:11)

SHARLYKOVA, T.S., ordinator

Characteristics of the sources of syphilis infection in the Tatar
A.S.S.R. from 1944 - 1958. Kaz. med. zhur. no.6:76-77 N-D '61.
(MIRA 15:2)

1. Kafedra kozhnykh i venericheskikh bolezney (zav. - prof. N.N.Yasnitskiy)
Kazanskogo meditsinskogo instituta.
(TATAR A.S.S.R. — SYPHILIS)

SHARMA, A.K.; CHATTERJE, T.

Radiation study as a means of working out the strain difference of *Pisum sativum* L. *Folia biol* 11 no.2:159-166 '63.

1. Cytogenetics Laboratory, Botany Department, University of Calcutta, 35 Ballygunge Circular Road, Calcutta 19, India.

SHARMA, B., aspirant

Comparative study of physical and chemical mutagens based
on the frequency of mutation in the second generation. Izv.
TSKHA no.4:127-140 '65. (MIRA 18:11)

1. Kafedra plodovodstva Moskovskoy sel'skokhozyaystvennoy
ordena Lenina akademii imeni Timiryazeva. Submitted April 1,
1965.

4150C

S/124/62/000/010/003/015

D234/D308

26.1410

AUTHORS: Srivastava, A. C. and Sharma, S. K.

TITLE: The effect of a transverse magnetic field on the flow between two infinite discs - one rotating and the other at rest

PERIODICAL: Referativnyy zhurnal, Mekhanika, no. 10, 1962, 6, abstract 10B28 (Bull. Acad. polon. sci. Ser. sci. techn., 1961, 9, no. 11, 639-644 (Eng.; summary in Rus.))

TEXT: The authors consider the flow of an incompressible, viscous, electrically conducting liquid between two infinite discs at a distance d from each other. One of the discs is at rest and the other rotates with a constant angular velocity Ω . A homogeneous external magnetic field H_0 is applied along the z -axis which is perpendicular to the discs. The solution of the magnetohydrodynamic equations is sought in the form $u = r\Omega F(\eta)$, $v = r\Omega G(\eta)$, $w = \Omega d H(\eta)$, $p = \rho \nu \Omega (-P(\eta) + \lambda r^2/d^2)$ where $\eta = z/d$, r is the radius, z the coordinate along the axis taken from the rotating disc, ν is

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SHARMAGIY, Yu.V.

Modernization of the KP-59 apparatus. Energ. i elektrotekh.
prom. no.2:69-71 Ap-Je '62. (MIRA 15:6)

1. Krymenergo.
(Electric power distribution--Communication systems)

GOCHAKOV, B.G.; PROSKOVSKIY, A.M.; SHARMAGIY, Yu.V.; MAUER, A.A.

High-frequency wave trap filters with 50 to 330 kc. attenuation band. Energ. i elektrotekh. prom. no.1:20-22 '62. (MIRA 15:6)

1. Krymenergo.

(Electric filters)

(Electric power distribution--Communication systems)

1970-71, 1971-72, 1972-73

Increase in the number of subscribers of the USSR stand up to
for. Inorg. i elektrotekh. prom. no.4:67-69 6-9 '63. (M.R. 17:10)

SHARMAI, E. [Sarmai, E.]

Alternative use of two different automatic systems in three-phase
roentgen diagnosis apparatus. Periodica polytechn electr 5 no.3:306-313
'61.

L 1138-66

(A)

ACCESSION NR: AP5023760

UR/0349/65/000/008/0016/0018
631.821

AUTHOR: Sharmakov, Ye. F. (Chief); Kutrov, A. N. (Head agronomist)

TITLE: Liming is the basis for productivity

SOURCE: Zemledeliye, no. 8, 1965, 16-18

TOPIC TAGS: lime, fertilizer, agriculture science, soil property, soil chemistry

ABSTRACT: Data are given on low agricultural productivity prevalent in the Safonovskiy Rayon of the Smolenskaya Oblast due to acid soil, and liming is recommended as a remedy for this situation. Work has been undertaken to improve organization of fertilization and liming of the soil in this territory. Equipment is described which has been designed especially for adding lime to the soil. Winter liming is recommended. More than 7 thousand hectares of soil in this territory were treated with lime in 1964, and it is predicted that the area treated in 1965 will be increased 12.6 thousand hectares.

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SHARMAN, L.N., arkhitektor, laureat Stalinskoy premii.

Building elements for maintenance and repair shops of machine-
tractor stations. Sbor.mat. o nov.tekh. v stroi. 16 no.6:3-8
'54. (MLRA 7:7)

(Machine-tractor stations--Buildings)

USSR / Pharmacology. Toxicology. Chemicotherapeutic
Preparations. Anti-Biotics. V

Abs Jour : Ref. Zhur - Biologiya, No. 3, 1959, 14034

Author : Sharmanov, T. Sh.
Inst : Karaganda Medical Institute
Title : On the Problem of the Influence of Syntomycin
on the Blood.

Orig Pub : Tr. Karagandinsk. med. in-ta, 1957, 1, No. 4,
248-250

Abstract : Observations were conducted on 20 rabbits. Syn-
tomycin (I) was introduced in doses of 50 and
250 mg/kg singly and repeatedly over the course
of 14 days. Small doses of I do not induce any
changes in the blood counts. Under the influ-
ence of repeated introduction of I in larger

Card. 1/2

SHARMANOV, T.Sh.

Changes in the blood picture influenced by synthomycin. Farm. i toks.
22 no.5:440-445 S-O '59. (MIRA 13:3)

1. Kafedra farmakologii (zaveduyushchiy - prof. A.D. Shteynberg)
Karagandinskogo meditsinskogo instituta.
(CHLORAMPHENICOL pharmacol.)
(BLOOD CELLS pharmacol.)

SHARMANOV, T. Sh. Cand Med Sci -- "Data on ^{an} experimental study of the effects of synthomycin and levomycetin upon the blood." Alma-Ata, 1961 (Joint Academic Council of Insts of Physiology, Regional Pathology, ^{and} Clinical and Experimental Surgery, Acad Sci KaSSR). (KL, 4-61, ²¹²~~212~~)

-399-

S. S. MANOV, T. Sn.; M. S. A. F. K.

Picture of the peripheral blood in the healthy population of
the southeastern zone of Kazakhstan. Izv. AN Kazakh. SSR Ser.
med. nauk no. 2: 78-80 '63. (MIRA 16:10)
(ALAKUL'SKIY DISTRICT—BLOOD—ANALYSIS AND CHEMISTRY)

SHARMANOV, T.Sh.; ASYLBEKOVA, K.S.

Changes in the blood picture in pulmonary tuberculosis
according to expeditionary materials in Alakul'skiy District.
Izv. AN Kazakh. SSR. Ser. med. nauk no.3:46-51 '63.
(MIRA 17:1)

KARAYYSHEV, Abdykadyr, Deputat Verkhovnogo Soveta Kirgizskoy SSR;
SHAPMANOVA, L.F., red.; BEYSHENOV, A., tekhn. red.

[Our practices of mechanizing livestock farms] Nash opyt me-
khanizatsii truda v zhivotnovodstve. Frunze, Kirgizskoe gos.
izd-vo 1960. 57 p. (MIRA 15:3)

1. Predsedatel' kolkhoza "Kenesh" Ivanovskogo rayona (for
Karmyshev). (Stock and stockbreeding) (Farm mechanization)

SHARMANOVSKIY, I., inzh.

Thin-walled pipes in heating and gas supply systems. Sel'. stroi.
16 no.12:23 D '61. (MIRA 15:2)
(Heating pipes)(Gas pipes)

SHARMANOVSKIY, I., inzh.

Small-scale sewerage for individual homes. Sel'.stoi. 15
no.4:28-30 Ap '60. (MIRA 16:1)
(Sewerage, Rural)

SHARMANOVSKIY, I., inzh.

Economical earth dams. Sel'. stroi. no.6:4 Je '62.
(Dams)

(MIRA 15:7)

SHARMANOVSKIY, I., inzh.

Tower trickling filters for rural localities. Sel'.
stroj. no.10:28-29 0 '62. (MIRA 15:11)
(Water--Purification)

SHARMANOVSKIY, I., inzh.

Rural water-supply pumping stations. Sel'. stroi. no. 12:14
D '62. (MIRA 16:1)

(Pumping stations)

SHARMANOVSKIY, I.M., inzhener.

Experience in planning, building and operating a spillway earth dam.
Gidr.st. si. 23 no.3:17-20 '54. (MIRA 7:6)

(Dams)

SHARMANOVSKIY, I. M.

AID P - 1755

Subject : USSR/Hydraulic Engineering Construction

Card 1/1 Pub. 35 - 14/21

Author : Sharmanovskiy, I. M.

Title : ~~Computation of normal and limit depths in narrow canals~~
with trapezoidal cross-section.

Periodical : Gidr. stroi., v.24, no.2, 42-43, 1955

Abstract : Computing normal depths in canals with the help of
equations is offered and formulae for narrow canals are
given.

Institution: None

Submitted : No date

~~SHARMANTOSKIY~~ I.M., inzhener.

Four years operating an experimental earth spillway dam. Gidr.
stroil. 26 no.6:27-28 Je '57. (MLRA 10:7)
(Dams)

SHARMANOVSKIY, I., inzh.

Spillway earth dam. Sel'. stroi. 12 no.3:4-7 Mr '58. (MIRA 11:3)
(Dams)

SHARMANOVSKIY, I., inzh.

Reconstructing dams with damaged secondary spillways. Sel'.
stroil. 13 no.11:27-28 N '58. (MIRA 11:12)
(Dams)

SHARMANOVSKIY, I., inzh.

Automatic stock watering without using metal pipes. Sel. stroi. 14
no.11:24-25 N '59 (MIRA 13:3)
(Cattle--Watering)

SHARFMANOVSKIY, Ivan Markovich; MESHKOVSKAYA, M., red.; PAVLOVA, S.,
tekhn. red.

[Water supply and sewerage for villages] Vodosnabzhenie i ka-
nalizatsiia poselkov. Moskva, Mosk. rabochii, 1962. 158 p.
(MIRA 15:4)

(Sewerage, Rural) (Water supply, Rural)

MIKHALKA, Tibor; SHARMAR, Ivan

How far should we go in increasing live weight of sheep in order
to obtain higher wool clips? Zhivotnovodstvo 20 no. 7:96 J1 '58.
(MIRA 11:8)

1. Issledovatel'skiy institut zhivotnovodstva, Otdel ovtsevodstva,
Budapesht.

(Sheep)

SHARMAY, I.A.

Mechanical selective action of the sea as a factor in ore deposition. Vop.min.osad.obr. 3/4:121-131 '56. (MLRA 9:11)

1. Gosuniversitet imeni V.M.Molotova, Rostov.
(Ore deposits)

GINZBURG, A.I.; BEKASOVA, L.V.; SHARMIN, N.F.

Surface studies of aerial anomalies characteristic of some
types of rare metal deposits. Geol. ~~met.~~ ^{met.} ~~red.~~ ^{red.} ~~slam.~~ ^{slam.} no. 20.
84-115 '60. (MIRA 17:5.

met

Sharnin, A.A.

Synthesis and properties of niobium compounds. R. I.
Krylov and A. A. Sharnin. J. Gen. Chem. U.S.S.R. 28
1637-40 (1955) (Engl. translation).—See C.A. 50, 7040c.
H. M. R.

Notes

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KRYLOV, Ye.I.; SHARNIN, A.A.

Synthesis and properties of niobium bronzes. Zhur.ob.khim. 25
no.9:1680-1685 S '55. (MIRA 9:2)

1.Ural'skiy politekhnicheskiy institut.
(Niobates)

18.8300, 18.8400, 18.3100

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SCV/136-59-10-10/18

AUTHORS: Averbukh, Ya.D., Potaskuyev, K.G. and Sharnin, A.A.

TITLE: Causes and Means of Reducing the Wear of the Boiler Tubes in the Steam Digester Batteries During Production of Alumina

PERIODICAL: Tsvetnyye metally, 1959, Nr 10, pp 58-64 (USSR)

ABSTRACT: The object of the investigation described in the present paper, carried out jointly by the Department of Chemical Engineering at the Urals Polytechnical Institute, the Bogoslovsky Aluminium Plant (BAP) and the Urals Aluminium Plant (UAP), was to determine the causes and find means of preventing excessive wear of the tubes through which the alkaline aluminate solution is passing through the steam-heated digesters. The importance of the problem is illustrated by the fact that the life of the tubes in the first (on the steam entry side) digester at BAP was only three months, the life of the tubes in the first digesters of the duplex batteries at UAP being approximately eight months. It had been observed that wear of the tubes at BAP was most pronounced at a distance of 1.5 to 1.6 m from the top baseplate; at this point

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the tube wall, as growth of those formed earlier, which are now distributed uniformly throughout the volume of the liquid (Ref 1). It follows that the intensity of the movement of the liquid layer adjacent to the tube wall should be at its maximum in the boiling zone, since it is there that the vapour bubbles are formed; consequently, wear of the tube is localized in this zone. The tubes used at UAP are also 7 m long; the temperature of the solution (containing 250 to 260 g/l $\text{Na}_2\text{O}_{\text{caustic}}$) entering the tube of the first digester is 105 to 115°C, ie below its boiling point; it is for this reason that boiling of the solution takes place in the middle part of the tube where, also, most intensive wear occurs. The hypothesis formulated above was checked experimentally by studying wear of tube samples subjected to the action of concentrated, industrial, alkaline aluminate solutions under conditions of: (a) absence of boiling, (b) boiling at the solution-tube wall interface and (c) boiling in the volume of the solution. The apparatus shown in Fig 1 was used for this purpose. The solution was contained in an open tank

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experiment was six hours. All specimens were subjected to the same preliminary treatment: polishing, washing in alcohol, drying in a desiccator and weighing; after the test, the loose products of erosion were brushed off, the specimens were washed in water and then in alcohol and, after drying, were weighed again. The rate of wear, $K(g/m^2/hr)$, was calculated from the formula given on p 59 where: Δg - loss of weight; S - specimen surface area, m^2 ; τ - duration of the test, min. The depth of penetration, $\Pi(mm/year)$, was calculated from the second formula on p 59 where: γ - specific gravity of the metal. The results are reproduced in Fig 2 where $\Pi(mm/year)$ is plotted against the rate of the heat flow, $N(kcal/m^2/hr)$, bottom scale), for the top (curve 3), middle (curve 1) and bottom (curve 2) specimens. It will be seen that the depth of penetration was less in the bottom specimen and that in this case, it was practically unaffected by the variation of N . Thus the results of these experiments confirmed the view that localized wear of the tubes is associated with boiling of the solution near the heating surface.

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However, the question whether this wear is caused by cavitation disintegration, erosion by the solid particles suspended in the solution or corrosion remained still unanswered. The results of experiments in which solutions free from suspended solid particles had been used, proved that erosion plays no part in causing wear of the tubes. The fact that the investigated effect had been observed only in tubes carrying the strong solution (ie in those which pass through the first of the digesters constituting a battery) indicated that cavitation phenomena cannot be regarded as the cause of wear of the tubes either. To prove this point, the previously described experiments were repeated under identical conditions, except that the solution was mechanically agitated but not boiled (ie there was no formation of the vapour bubbles); the solution was agitated by rotating the specimens at a speed varying between zero and the maximum rate of flow of the solution through the pipes under industrial conditions. The results of these experiments are reproduced in Fig 2 (curve 4) where Π_1 (mm/year) is plotted as a function of

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the peripheral velocity, v , (m/sec, top scale) of the specimens. It will be seen that Π_1 increased with increasing v ; at high values of v , Π_1 attained values similar to those obtained as a result of boiling at the heating surface. This proves that localized wear of the tubes is not caused by cavitation. Consequently, it has to be concluded that the investigated phenomenon is caused by a diffusion material transfer, ie by electrochemical or chemical dissolution of iron in the alkaline aluminate solution. Since the results of experiments, reproduced in Fig 2 in the form of a Π_2 versus v curve (curve Nr 5), in which pure NaOH solution had been used, were similar to those in which an industrial $\text{Na}_2\text{O}_{\text{caustic}}$ -bearing solution had been employed, it was concluded that in this case NaOH is the corroding agent. It is known that corrosion of the iron-carbon alloys in alkaline solutions consists in anodic dissolution of iron; the corrosion products form a protective layer on the metal surface which, however, is soluble in hot, concentrated

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alkaline solution, the rate of corrosion being determined by the rate of dissolution to this protective layer (Ref 2 and 3), which in turn is affected by the temperature and concentration of the solution and by the degree of agitation. The effect of these factors was investigated in the next series of experiments in which the peripheral velocity of the rotating specimens was constant and maintained at v equal 0.8 m/sec: the results are reproduced in Fig 3 where \bar{D} (mm/year) is plotted as a function of the $\text{Na}_2\text{O}_{\text{caustic}}$ content (g/l) of the solution at temperatures ranging from 70 to 140°C. It can be seen that at temperatures up to 110°C the variation of the concentration of Na_2O in the solution had very small effect on \bar{D} , which however, increased rapidly with the increasing $\text{Na}_2\text{O}_{\text{caustic}}$ content in the solution at higher temperatures. The same solutions were used in the next series of experiments, each of which was carried at the temperature corresponding to the boiling point of the respective solution (at the atmospheric pressure). The peripheral velocity of the specimens was varied within wide limits.

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in addition, the effect of agitation (the peripheral velocity of the specimens) was studied also in solutions containing approximately 290 g/l $\text{Na}_2\text{O}_{\text{caustic}}$ at temperatures between 80 and 115°C. The results of all these tests showed that the lower the concentration and temperature of the solution, the less is the effect of the intensity of agitation on the rate of corrosion. Thus, for instance, the rate of corrosion in a solution containing 200 g/l $\text{Na}_2\text{O}_{\text{caustic}}$ tested at temperatures up to its boiling point (at atmospheric pressure), is practically independent from the intensity of agitation; the effect of agitation, however, becomes apparent at higher temperatures and in more concentrated solutions. The results of all the experiments described above provided a complete explanation of the causes and the mechanism of localized wear of the boiler tubes under consideration. The next problem to be solved was the selection of a tube material which would be more corrosion-resistant and which, in addition, would possess the following characteristics: resistance to inter-granular corrosion (caustic brittleness);

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availability and low cost; thermal coefficient of expansion and electrode potential as near as possible to those of steel St 20 from which other components of the digesters are made; high thermal conductivity; workability. The code marks and the chemical composition of steels selected for the corrosion tests are tabulated on p 62. Industrial alkaline aluminate solution, containing 290 g/l Na_2O caustic, was used in the experiments carried out at the boiling point (140°C) of the solution which was agitated by rotating the specimens; each test was continued until a constant rate of corrosion of the tested steel was attained; the solution was changed every 24 hr to keep low its iron content which, as had been established, affects the rate of corrosion (the inside of the tube specimens was nickel-plated for the same reason). The results of the corrosion tests are reproduced in Fig 4 where $K(\text{g}/\text{m}^2/\text{hr})$ of various steels (including the plain carbon steel St 10) is plotted against time, τ (hr). In the last series of experiments,

Card 10/11 the effect of temperature on the rate of corrosion of

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various steels was investigated, in all these tests v equal 0.5 m/sec was employed. The results are reproduced in Fig 5 where $K(g/m^2/hr)$ is plotted against temperature ($^{\circ}C$), the duration (hr) of each test being indicated by figures in brackets. All alloy steels were found to be more corrosion-resistant than steel St 10 and while the rate of corrosion of the latter increased with rising temperature, the rate of corrosion of the alloy steels either remained constant or decreased. It was concluded that on economical grounds, steels 10KhSND or 15KhSND are most suitable for replacing steel St 10 as a material for the construction of the boiler tubes under consideration. Acknowledgments are made to T.A.Tkachenko, G.Z.Nasyrov, A.K.Styazhkin, T.Z.Mikhaleyeva, N.V.Yeremeyeva and R.G.Rozenblyum who participated in this work. There are 5 figures, 1 table and 7 Soviet references.

Card 11/11

AVERBUKH, Ya.D.; SHARNIN, A.A.; POTASKUYEV, K.G.

Anodic protection of steel in alkali media and the effect of dissolved iron on it. Izv.vys.ucheb.zav.;khim.i khim.tekh. 4 no.4: 594-598 '61. (MIRA 15:1)

1. Ural'skiy politekhnicheskii institut imeni Kirova, kafedra protsessov i apparatov.
(Steel) (Electrolytic corrosion)

18 8310

32641
S/076/62/036/001/013/017
B119/B101

AUTHORS: Sharnin, A. A., and Shabalin, K. N.

TITLE: Anodic passivation of steel in concentrated lyes by the current of the galvanic pair Fe-Ni

PERIODICAL: Zhurnal fizicheskoy khimii, v. 36, no. 1, 1962, 209 - 213

TEXT: This is a study of the protective effect of Ni coatings or Ni inclusions in nickel steels against the corrosion of steel in strong lyes. Circular Ni coatings (diameter 5, 8, 10, 15, 30 mm; thickness 40 - 50 μ) were electrodeposited on plates of electrolytically pure iron (electrolyte: 200 g/liter NiSO₄·7 H₂O, 3 g/l NaCl, 25 g/l H₂BO₃, 25 g/l Na₂SO₄; current density 0.8 a/dm²; duration 4 hrs) and exposed to NaOH in an autoclave, with the sample rotating continuously at 30 - 150 rpm. Temperature 140°C, duration of experiment 0.3 - 12 hrs. The lye concentration was varied between 200 and 400 g/l Na₂O. Around the edge of the Ni circle, a circular iron oxide film is formed, which protects the Fe against further corrosion. The film reaches its greatest width after 4 hrs. The investigation was
Card 1/2

Anodic passivation of steel...

32641
S/076/62/036/001/013/017
B119/B101

conducted with an МММ-8 (MIM-8) microscope. The size of the film increases with the radius of the Ni coating (cathode), but decreases with increasing lye concentration and with increased speed of the sample. With an Ni coating of 15 mm diameter and a lye concentration of 300 g/l Na₂O, the oxide ring is 0.05 mm wide. Its theoretical width is 0.06 mm. V. V. Losev, B. N. Kabanov, V. G. Levich, A. N. Frumkin, P. D. Lukovtsev, S. D. Levina, Z. A. Iofa, and K. G. Potaskuyev are mentioned. There are 6 figures, 1 table, and 8 Soviet references.

ASSOCIATION: Ural'skiy politekhnicheskiy institut im. S. M. Kirova (Ural Polytechnic Institute imeni S. M. Kirov)

SUBMITTED: July 21, 1960

Card 2/2

L 6762-65 EWT(m)/EWP(q)/EWP(b) ASD(f)/AFMDC/ASD(m)-3 JD

ACCESSION NR: AP4045409

S/0136/64/000/009/0060/0064

AUTHOR: Sharnin, A. A.; Shabalin, K. N. 47

TITLE: Corrosion of carbon and stainless steel in boiling alkaline solutions

SOURCE: Tsvetnyye metally*, no. 9, 1964, 60-64

TOPIC TAGS: carbon steel, stainless steel, steel corrosion, carbon steel corrosion, stainless steel corrosion, carbon steel alkaline corrosion, stainless steel alkaline corrosion, alkaline corrosion, high temperature corrosion

ABSTRACT: The tubes of evaporators for aluminum oxide production by the Bayer process are rapidly destroyed by concentrated alkaline solutions. Previous studies by Ya. D. Averbukh, K. G. Potaskuyev and A. A. Sharnin have shown that corrosion is increased by turbulence of the solution at the heated surface. In previous publications by the authors, the corrosion resistance of stainless steel was found to be higher than that of carbon steel. However, at the Bogoslovskiy alyuminiyevyy zavod (Bogoslovsk Aluminum Plant), stainless steel tubes were destroyed at the same rate as carbon steel tubes, while at the Bereznikovskiy sodovoy zavod (Berezniki Soda Plant) stainless steel tubes were found to be more durable than carbon steel tubes. It was assumed by the authors that the basic cause of rapid corrosion in the aluminum plant was boiling in the tubes, this being checked in

Card 1/3

L 6762-65

ACCESSION NR: AP4045409

the present paper. Tubes of carbon steel 20 and stainless steel 1Kh18N9T were tested under the influence of solutions containing 300 g/L of caustic soda or 60% NaOH and 40% KOH (concentrations of 500 g/L recalculated for caustic soda), at temperatures of 115 and 140C for 8 hours. The testing device for measuring tube wear is described. The inserted tubes were considered to be divided into three zones: upper, middle and lower. The lower zone was in the non-boiling solution and the upper one was in the steam. The intensity of steam formation was changed in different tests by varying the amperage in the heating coil. The rate of wear was found from the loss of weight. Analysis of the results showed that stainless steel tubes are 2-20 times as resistant to alkaline corrosion as carbon steel tubes. The corrosion rate increased with the heating rate and with stirring of the solution, and was higher in the middle than in the upper zone. At low heat loads in the upper zone, stainless steel tubes showed higher durability than carbon steel tubes, but as the heating rate rose the durability became equal. The durability of stainless steel tubes at Berezniki is explained by nickel passivation, but the passivated layer may easily be removed by a brush. The article concludes that stainless steel tubes should be used for aluminum oxide production only when the tubes are not located in the boiling zone. Orig. art. has: 4 figures.

Card 2/3

L 6762-65

ACCESSION NR: AP4045409

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: MM

NO REF SOV: 006

OTHER: 000

Card 3/3

SHARNIN, A.A.; TELEPNEVA, A.Ye.; LAPSHINA, E.F. [deceased]

Effect of the composition of sulfate-hyposulfite solutions
on the corrosion of carbon steel as applicable to evaporators
in the production of chromium oxide. Zashch. met. 1 no.2:
241-243 Mr-Apr '65. (MIRA 18:6)

1. Ural'skiy nauchno-issledovatel'skiy khimicheskiy institut.

SHARYIN, A.A.; LAPSHINA, R.P.

Corrosion resistance of certain steels in sulfase-hyposulfite solutions in connection with evaporator equipment for the production of chromium oxide. Zashch. met. 1 no.3:342-344 My-Je '65. (MIRA 18:8)

1. Ural'skiy nauchno-issledovatel'skiy khimicheskiy institut.

ACC NR: AF6018171
 AUTHOR: Sharnin, A. A.; Balandina, L. I.; Yakimenko, T. R.
 ORG: Ural Scientific Research Chemical Institute (Ural'skiy nauchno-issledovatel'skiy khimicheskiy institut)
 TITLE: Corrosion of certain metals and alloys in molten aluminum sulfate
 SOURCE: Zashchita metallov, v. 2, no. 1, 1966, 106-110
 TOPIC TAGS: aluminum compound, alloy, corrosion, aluminum, copper, lead, iron, titanium, steel, bronze, corrosion resistant metal, corrosion resistance/AD aluminum, MI copper, AZh9-4 bronze, OF6.60.15 bronze, S-1 lead, VT-1 titanium, 1Kh18N9T steel, El-448 steel, El-432 steel, El-943 steel
 ABSTRACT: To find a corrosion-resisting material for making crystallizers which are severely corroded in production, tests were conducted to determine the rate of corrosion of various metals and alloys in molten aluminum sulfate. Plate specimens were washed with a solution of sodium hydroxide and alcohol and suspended on a nylon support. The tested materials were Al aluminum, MI copper, bronzes AZh9-4 and OF6.6-0.15, S-1 lead, gray iron, VT-1 titanium, and steels 1Kh18N9T, El-448, El-432 and El-943. As the most resistant of the tested materials, steel El-943 and copper MI were tested to determine corrosion resistance of weld joints. Specimens of steel El-943 were welded with electrodes from the same grade of steel (nominal composition of welding rod in %: C ≤ 0.06, Mn ≤ 0.6, Si ≤ 0.6, S ≤ 0.2, P ≤ 0.03, Cr = 22-25, Ni = 26-29, Cu = 2.5-3.5, and Ti = 56 [g]). Welding copper specimens was done with copper electrodes. Surfaces of the weld joints were ground even with the base metal. The corrosion resistance of weld joints of steel El-943 is approximately the same as the base metal. For copper they corrode at a significantly higher rate than the base metal. Weld joints of copper and steel El-943, heat-affected zones and all remaining surfaces of the specimens were

Card 1/2

UDC: 620.193.4

L 39870-66

ACC NR: AP6018101

corroded uniformly. According to the corrosion scale of weld joints, the weld joints of steel El-943 are in the category of the sufficiently resistant, while joints of copper are in the category of relatively resistant. Orig. art. has: 2 tables [JFES]

SUB CODE: 13, 11 / SUBM DATE: 03Jul65 / ORIG REF: 003

Card

2/2

↓ 5

SHARNIN, A.A.; BALANDINA, L.I.; YAKIMENKO, T.R.

Corrosion of certain metals and alloys in fused aluminum sulfate. Zashch. met. 2 no.1:108-110 Ja-F '66.

(MIRA 19:1)

1. Ural'skiy nauchno-issledovatel'skiy khimicheskiy institut.
Submitted July 3, 1965.

ACC NR: AP6029014

(A)

SOURCE CODE: UR/0413,6/000/014/0019/0019

INVENTOR: Sharnin, G. P.; Moysak, I. Ye.; Gryazin, Ye. Ye.

ORG: None

TITLE: A method for producing trioxynonanenitro-1,3,5-triphenylbenzenes. Class 12, No. 183726

SOURCE: Izobret prom obraz tov zn, no. 14, 1966, 19

TOPIC TAGS: aromatic nitro compound, acetate, hydrocarbon

ABSTRACT: This Author's Certificate introduces a method for producing trioxynonanenitro-1,3,5-triphenylbenzenes. Trichlorononanenitro-1,3,5-triphenylbenzenes are interacted with sodium acetate in acetamide at 130-140°C.

SUB CODE: 07/ SUBM DATE: 14Oct64

Card 1/1

UDC; 547.628.3.07

ACC NR: AP6025585

SOURCE CODE: UR/0413/66/000/013/0018/0018

INVENTOR: Sharnin, G. P.; Murgatin, V. V.

ORG: none

TITLE: Preparation of 1-chloro-2,3,4,6-tetranitrobenzene. Class 12, No. 183197
[announced by Kazan Chemical Technology Institute imeni S. M. Kirov (Kazanskiy khimi-
ko-tehnologicheskii institut)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 13, 1966, 18

TOPIC TAGS: pesticide, dye, chlorotetranitrobenzene, chlorotrinitroaniline,
ammonium persulfate, aniline, ammonium compound

ABSTRACT:

To extend the raw material base for dyes and pesticides, 1-chloro-2,4,6-
trinitroaniline is treated with ammonium persulfate in concentrated
sulfuric acid at 50—99°C; the reaction product is isolated by known methods.

[W.A. 50; CBE No. 10]

SUB CODE: 07.04 SUBM DATE: 09Oct65/

UDC: 547.546.07

Card 1/1

KOZLOV, L.M.; BURMISTROV, V.I.; SHARNINA, A.P.

Nitroalkyd resins. Report No.1: Condensation polymerization of adipic acid with nitrodiols and nitrotriols. Trudy KKHTI no.30: 128-135 '62.

Nitroalkyd resins. Report No.3: Condensation polymerization of glutaric and pimelic acids with nitrodiols and nitrotriols. (MIRA 16:10)
144-147

KOZLOV, L.M.; BURMISTROV, V.I.; KHANNANOVA, M.N.; ABRAMOVICH, L.K.;
SHARNINA, A.P.; BOGDANOV, B.L.

Nitroalkyd resins. Report No.6: Condensation polymerization of
nitrodiols and nitrotriols with oxalic, malonic, and succinic acids.
Trudy KKHTI no.30:161-169 '62. (MIRA 16:10)

ACC NR: AR6015909

(A)

SOURCE CODE: UR/0081/65/000/022/S014/S014

AUTHOR: Kozlov, L. M.; Burmistrov, V. I.; Sharnina, A. P.

TITLE: Nitroalkyd resins. Report No. 7. Polycondensation of 2-nitro-1,3-propanediol with dibasic acids

SOURCE: Ref. zh. Khimiya, Abs. 22585

REF SOURCE: Tr. Kazansk. khim.-tekhnol. in-ta, vyp. 33, 1964, 232-235

TOPIC TAGS: organic nitro compound, dicarboxylic acid, polycondensation

ABSTRACT: The polycondensation of 2-nitro-1,3-propanediol (I) with chlorides (C) of seven aliphatic and three aromatic dibasic acids was studied. An equimolar mixture of I and C (0.1 mole each) was heated to 40-50° for aliphatic and to 60° for aromatic C until the start of the reaction, which was kept at 25-30° for 8-10 hr and at 60-70° for 1.5 hr. The polyesters (PE) were purified by multiple reprecipitation with petroleum ether from an acetone solution. The PE obtained were (the initial acid, yield in %, m. p., molecular weight, and general appearance of the PE are indicated): malonic, 51, 45-48°, 1920, dark; succinic, 79, 84-87°, 909, dark; glutaric, 80, 94-97°, 3413, brown; adipic, 77, 28-30°, 2605, brown; pimelic, 71, 32-34°, 1163, clear; azelaic, 80, 47-51°, 2250, brown; sebacic, 65, 47-50°, 2563, brown; phthalic, 52, 70-73°, 600, waxy; 3-nitrophthalic, 55, 29-32°, 1320, waxy; terephthalic, 50, 60-62°, transparent. PE obtained from aliphatic acids with an odd number of C atoms melt at

Card 1/2

13001-00

ACC NR: AR6015909

Higher temperatures than those with an even number of C atoms. For report No. 6, see
Ref. zh. Khimiya, 1963, Abs. 12855. L. Andreyev. [Translation of abstract]

SW CODE: 07

Card 2/2 H S

SHARNIN, G.P.; MOYSAK, I.Ye.

Synthesis of 1-amino-3-propanol by chemical reduction of ethylene
cyanohydrin. Trudy KKHTI no.26:93-95 '59. (MIRA 15:5)
(Cyanohydrins) (Reduction, Chemical)

FEDOSEYEV, Grigoriy Anisimovich; SHARNINA, Ye.S., redaktor; MAZUROVA, A.F.,
tekhnicheskiiy redaktor .

[Traveling through the Eastern Sayans] My idem po Vostochnomu Saianu.
[Novosibirsk] Novosibirskoe knizhnoe izd-vo, 1956. 1956. 391 p.
(MLRA 10:4)

(Sayan Mountains--Description and travel)

29704

S/161/61/003/C10/036/036

B125/B102

24.2800(1145,1153,1160,1142)

AUTHORS: Goldobin, A. N., Lezheyko, L. V., and Sharnopcl'skaya, Ye. T.

TITLE: Piezoelectric resistance in tellurium

PERIODICAL: Fizika tverdogo tela, v. 3, no. 10, 1961, 3247 - 3249

TEXT: A study was made of the change in resistance when monocrystalline tellurium specimens of different concentrations were subjected to uniaxial elongation between 77 and 450°K. The specimens had been previously annealed in order to obtain an ordered structure. In this way, the temperature dependence of the piezoelectric resistance was unified to some extent. Present data refer to the constant $\pi_{33} = \Delta Q/QZ$ of piezoelectric resistance (current and stress Z are directed along the trigonal crystal axis). $\pi_{33} = f(\frac{1}{T})$ is almost linear in the region of impurity conductivity, and displays the characteristic deep minimum when passing to the region of intrinsic conduction. This temperature dependence was measured for an impurity concentration $N_A = 2 \cdot 10^{15} \text{ cm}^{-3}$. The constant of the piezoelectric Card 1/4

29701
S/18:/61/003/010/036/036
B125/B102

Piezoelectric resistance in...

resistance depends greatly on the impurity concentration. The highest piezoelectric resistance is observed in the region of intrinsic conduction, and may be qualitatively described by a change of lattice parameters and by the narrowing of the forbidden band. As a consequence, the number of carriers excited by thermal motion also changes. Under these premises, the following holds:

$$\frac{d \ln \rho}{dZ} = \frac{\epsilon}{2kT} \left(\frac{a-1}{a} \right) \left(\frac{1 + \mu_p/\mu_n}{\frac{a-1}{a+1} + \frac{\mu_p}{\mu_n}} \right), \text{ where } a = (1 + (4np/N_A^2))^{-1/2}. \quad (2) \text{ was}$$

derived under the premise that μ_p/μ_n remains constant under load.

$d \ln \rho / dZ \rightarrow \epsilon / 2kT$ holds at high temperatures ($np > N_A^2$, $a \gg 1$). Under these

conditions, the pressure dependence of the forbidden band width is given by

$\epsilon = (3.5 \pm 0.1) \cdot 10^{-11} \text{ ev} \cdot \text{cm}^2 / \text{dyne}$ for specimens of different concentrations.

The change of resistance in the case of uniform pressure has the same sign as in the case of elongation. This is explained by the existence of

crossed atomic chains in the tellurium crystal structure. In the impurity region (in tellurium, where already at 77°K impurities are ionized), the

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29704

S/181/61/003/010/036/036
B125/B102

Piezoelectric resistance id...

carrier concentration cannot be affected by a change of the band width. In addition, an elongation by which no new impurity centers are produced can change only the hole-mobility tensor. The experimentally observed dependence of π_{33} on N_A has not been sufficiently clarified so far. To acquire a complete knowledge of the nature of the piezoelectric resistance in the impurity region, it is necessary to study the effect of elongation on the Hall effect and on other parameters of Te in this region. The high piezoelectric resistance between - 20 and + 200°C is a point in favor of the usability of tellurium crystals for constructing strain gages. A. R. Regel' is thanked for discussions. There are 1 figure and 4 references: 1 Soviet and 3 non-Soviet. The three references to English-language publications read as follows: P. W. Bridgman. Proc. Amer. Acad. Sci., 72, 159, 1938; J. Bardeen. Phys. Rev., 75, 11, 1777, 1949; J. D. Long, P. Li. Amer. Bull. of the Amer. Phys. Soc., 1, 1958; J. S. Blakemore, K. C. Heaps. Phys. Rev., 117, 687, 1960.

ASSOCIATION: Institut poluprovodnikov AN SSSR Leningrad (Institute of Semiconductors of the AS USSR Leningrad)

Card 3/4

S/072/63/000/004/003/005
A051/A126

AUTHORS: Mednikova, Ye. I., Sharnopol'skaya, Ye. T., Engineers

TITLE: Electrets based on glass

PERIODICAL: Steklo i keramika, no. 4, 1963, 11 - 13

TEXT: Electret is defined as a constantly electrified dielectric carrying a positive charge on one side and a negative one on the other. An attempt was made to create electrets based on several groups of glass: slag sitalles, bromine silicate low-alkaline glass, sitalles. Disk-shaped samples with a 70 mm diameter and 1 - 8 mm thickness were placed between electrodes, to the ends of which a constant voltage was supplied. The field intensity varied between 5 and 40 kw/cm. Polarization was conducted at 150 - 400°C for a period of 20 min to 2 h for the various glass groups. The polarization equipment is shown in Figure 1. The charge on the electret surface was measured according to the Eguohi elevated electrode method. By polarizing the above-mentioned glass groups, electrets were produced which retained their surface charge for no less than 4 months. Preliminary experiments showed that the slag-sitalles, the low-alkaline bromine-

Card 1/2

Electrets based on glass

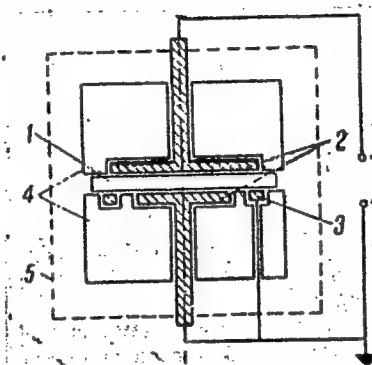
S/072/63/000/004/003/005
AC51/A126

silicate glass and the sitalles - all have the property of retaining the polarization. In order to establish the nature of polarization and other features of the electrets made of glass, it is suggested conducting tests on currents of depolarization under repeated heating of the electret. There are 3 figures.

ASSOCIATION: Konstantinovskiy zavod "Avtosteklo" (Konstantinov Plant "Avtosteklo")

Figure 1.

Legend: 1 - sample, 2 - electrodes,
3 - protective ring, 4 - insulators
made of molten quartzite, 5 - thermostat.



Card 2/2

L 60036-65 EWP(e)/EPA(s)-2/EWT(m)/EPF(c)/EWP(1)/EPA(w)-2/EWP(j)/T/EWP(b)
 PC-4/PQ-4/PR-4/PT-7 WW/JAJ/RM/WH

ACCESSION NR: AP5017984

UR/0072/65/000/007/0012/0013
 666.164

AUTHOR: Biyevetskiy, E. A. (Engineer); Sharnopol'skaya, Ye. T. (Engineer)

TITLE: Production of images on pyroceramics

SOURCE: Steklo i keramika, no. 7, 1965, 12-13

TOPIC TAGS: pyroceramic, electric image formation

ABSTRACT: When a light-colored sample of pyroceramic is kept in a strong electric field (about 20 kV/cm) for 1-2 hr. at 200-300C, a dark image is formed on the side of the positive electrode; no changes in composition take place because the current density (about 10 $\mu\text{A}/\text{cm}^2$) is low and the duration of the passage of current is short. The darkening results from a discharge in the air between the surface of the electrode and the surface of the pyroceramic. Essentially no structural changes are observed in the surface layer of the pyroceramic under the electron microscope. The darkening is probably due to an electrochemical change in the layer adjoining the surface at the sites of a strong discharge (for example, to a reduction of the ions of an element of variable valence such as iron entering into the composition of the pyroceramic). The chemical nature of the darkening is also indicated by the effect of annealing, which either makes the image

Card 1/2

L 60036-65

ACCESSION NR: AP5017984

disappear, or changes its color (e.g., from blue to pink). The degree of darkening changes with the composition of the material. The phenomenon described was used to produce an image of definite shape by employing an electrode or metal foil of the corresponding configuration. Projections on the electrode form dark spots on the pyroceramic, depressions form light areas, and intermediate portions produce half-tones. Further studies will probably make it possible to find compositions which will produce the desired colors.

ASSOCIATION: NIIAvtosteklo

SUBMITTED: 00

ENCL: 00

SUB CODE: MT

NO REF SOV: 002

OTHER: 000

Card 2/2 *lap*

SAVEL'YEV, V.A.; NARST, A.L.; SHARNOPOL'SKIY, A.I.; KANTOR, E.I.

The MGK magnetic gas analyzer for determining high oxygen concentrations. Avtom.i prib. no.3:69-71 JI-S '62.
(MIRA 16:2)

1. Lisicheanskiy filial Opytno-konstruktorskogo byuro avtomatiki.

(Gases--Analysis)

KULAKOV, F.M.; KARDASH, A.A.; BOBOVIKOV, R.S.; SPEVAKOVA, F.M.;
GOL'DIN, L.L.; KLEPOV, I.F.; KOSHKAREV, D.G.; RADKEVICH, I.A.;
SOKOLOVSKIY, V.V.; SHARNOV, B.I.

Magnetic field correction systems for a proton synchrotron.
Prib. i tekhn. eksp. 7 no.4:158-167 J1-Ag '62.
(MIRA 16:4)

1. Institut teoreticheskoy i eksperimental'noy fiziki Gosu-
darstvennogo komiteta po ispol'zovaniyu atomnoy energii SSSR
i Nauchno-issledovatel'skiy institut elektrofizicheskoy
apparatury Gosudarstvennogo komiteta po ispol'zovaniyu atomnoy
energii SSSR.

(Synchrotron) (Magnetic fields)

L 16564-65 EWG(j)/EWG(r)/EWT(1)/FS(v)-3/EWG(v)/EWG(a)/EWG(c) Pe-5/Pa-4/
Pb-4 AMD DD

ACCESSION NR: AR4045753

S/0299/64/000/013/M013/M013

SOURCE: Ref. zh. Biologiya. Svodny*y tom, Abs. 13M83

AUTHOR: Popov, V. I.; Nezdatny*y, M. M.; Sharobayko, V. I. B

TITLE: Effect of ribonucleic acid on transplant immunity development

CITED SOURCE: Sb. 3 Vses. konferentsiya po peresadke tkaney i organov, 1963, Yerevan, 1963, 77-78

TOPIC TAGS: ribonucleic acid, homotransplantation, skin, rabbit, immunity

TRANSLATION: Skin homotransplants were performed on rabbits' ears. RNA was isolated from the donors' livers by Georgiyev's method. In one experimental series the skin flaps were incubated in the donor's RNA for 3 days before transplantation. In other experimental series the rabbits received daily RNA injections after homotransplantation. In both series survival periods for the homotransplants were lengthened. Homotransplant survival periods increased more for the

Card 1/2

L 16564-65

ACCESSION NR: AR4045753

animals who received the subcutaneous RNA injections. Death of homotransplants was gradual, the homotransplants were not sloughed off, but were gradually resorbed, and healing of the wound took place with formation of a small scar. The action mechanism of donor RNA on homotransplant survival periods is not clear.

SUB CODE: LS

ENCL: 00

Card 2/2

VLADIMIROV, V.G.: See BUDALOV, V.G.

Effect of water on the rate of the reaction of
nitric acid with the metal of certain alloys.
Zhurnal Khim. Fiz. 1961, 36, 181. (N 1: 181)

J. Res. Nat. Bur. Stand. 1961, 66, 181. (N 1: 181)
English transl. in J. Res. Nat. Bur. Stand. 1961, 66, 181.

SHARCBAYKO, V.I.

Changes in the content of RNA in Purkinje's cells of the cerebellum
following x-irradiation. TSitologiya 6 no.1:101-104 Ja-F '64.
(MIRA 17:9)

1. Kafedra biokhimii Voenno-meditsinskoy akademii i Laboratoriya
khimii belka Leningradskogo universiteta.

ACCESSION NR: AP4025117

S/0020/64/155/003/0683/0684

AUTHORS: Ivanov, I.I.; Borovikova, O.N.; Vladimirov, V.G.; Dolgo-Sa-
burov, V.B.; Sharobayko, V.I.

TITLE: On the mechanism of reduction of the DNA level in body tissues
exposed to ionizing radiation

SOURCE: AN SSR. Doklady*, v.155, no.3, 1964, 683-684

TOPIC TAGS: nucleus DNA, DNA tissue level, X ray irradiation, lympho-
cyte, spleen lymphocyte, DNA destruction, acridine orange stain, ultra
violet green fluorescence, ultra violet red fluorescence

ABSTRACT: Earlier determination of DNA reduction in the cell nuclei
of mammal tissues (ultra violet cytospectrometry) gave only an average
DNA content in the cell, without taking account of its functional
state. The authors contend that the observed reduction is due to the
lower DNA content in cells which are dying or have died following
irradiation. They studied difference in functional condition, as re-
lated to DNA contents in spleen lymphocytes of 19 white rats one day
before and after whole body X-ray irradiation with a 300 roentgen dose

Card 1/2

ACCESSION NR: AP4025117

The ultra violet and other equipment are described. Staining with acridine-orange afforded cell differentiation according to the functional state, without impairing the reliability of quantitative DNA determination. Uninjured cells retained green fluorescence while that of the injured cells was red. The ultra violet technique of separate DNA determination in these cells is described. Nucleic acids were not isolated, since the small RNA content could be neglected in this case. DNA nucleus concentration in the cells with green fluorescence was almost the same for irradiated and non-irradiated lymphocytes ($6.49 \cdot 10^{-12}$ and $6.23 \cdot 10^{-12}$ g resp.) while that of cells with red fluorescence was considerably lower ($1.81 \cdot 10^{-12}$ g). This points towards death with depolymerization and decomposition of the latter's DNA. Orig. art. has 1 table.

ASSOCIATION: Boenno-meditsinskaya akademiya im. S.M. Kirova (Military Medical Academy)

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